Support and Maintenance

The SMARTS system nucleus is written entirely in IBM 390 Assembler and is therefore supported using ZAPs as the quickest and easiest way to provide corrections to customers.

This chapter covers the following topics:

- Reporting Problems
- Problem Resolution
- Maintenance

Reporting Problems

Problems should be reported to your local technical support center. You will be asked to provide whatever information is required to solve the problem. Generally, you should have the following available when reporting a problem:

1. Version, revision, and SM level of the SMARTS software where the problem occurred.
2. Type and level of operating system where SMARTS was running.
3. Version, revision, and SM level of other products associated with the problem (for example, Natural, Adabas).
4. Message numbers where applicable.
5. System log for a period of time before the event.
6. Sequence of actions used to cause the problem, if reproducible.
7. Name and offset of the module where the problem occurred. Where an ABEND occurs within a SMARTS module, generally RC will point to the start of the module where you will find a constant identifying the module. The PSW address should be subtracted from the address in RC to provide the offset into the module.
8. The register contents at the time of the ABEND.

With this information, it may be possible to identify a previous occurrence of the problem and a correction. If this is not the case, the following additional information is required:

1. The operating system online dump or SMARTS address space dump, as appropriate.
2. Output from the job where the failure occurred.
3. Other information that support personnel feel is relevant.

Problem Resolution

A number of tools are available to diagnose problems as follows.

Batch Dumps

When running in batch, a standard dump is taken for the POSIX server address space, as would be taken for a normal batch task. Standard diagnosis techniques may be applied to this dump.

Trace Facilities

Where problems are encountered with the operation of the POSIX server interface, the trace functions may be useful in determining the nature of the problem. POSIX server tracing may be activated using the POSIX server TRACE configuration parameter.

Maintenance

ZAPs for problems in the SMARTS product are provided in the following format:

AS*vrnnn*

- where

AS	identifies this as a SMARTS ZAP
vr	is the version and revision number of SMARTS to which the ZAP applies
nnn	is a sequential number uniquely identifying the ZAP

When a ZAP is provided to correct a problem, Software AG recommends that you use the following procedure:

1. Copy the load modules zapped by the fix to a temporary load library or sublibrary.
2. Apply the ZAP to the modules in the temporary load library or sublibrary using the AMASPZAP or the MSHP utility, respectively.

   Note:
   When a ZAP applies to an environment-specific module (that is, one beginning with the characters PAen where "e" is any character other than "A), it may be necessary to relink the module to activate the change.
3. Run SMARTS, placing the temporary load

   - library in an OS/390 environment in front of the standard APSvrs.LOAD dataset in the STEPLIB (for batch) and/or the COMPLIB (for SMARTS) concatenations.
   - sublibrary in a VSE/ESA environment in front of the standard APS library in the LIBDEF search chain.

4. Ensure that the problem has been resolved. If this is not possible immediately, it may be advisable to run in this way for a period of time until it is clear that
    - the ZAP has not caused any problems; and
    - the problem the ZAP is intended to fix has been corrected.
5. If the ZAP causes problems or does not clear the problem, the temporary load library or sublibrary may be deleted or cleared.
6. When you have verified the correction, copy the zapped modules back into your APSvrs.LOAD dataset or sublibrary.